



**Manchester
Metropolitan
University**

Leal Filho, W, Tripathi, SK, Andrade Guerra, JBSOD, Giné-Garriga, R, Orlovic Lovren, V and Willats, J (2018) Using the sustainable development goals towards a better understanding of sustainability challenges. *International Journal of Sustainable Development and World Ecology*, 26 (2). pp. 179-190. ISSN 1350-4509

Downloaded from: <https://e-space.mmu.ac.uk/621472/>

Version: Accepted Version

Publisher: Taylor & Francis (Routledge)

DOI: <https://doi.org/10.1080/13504509.2018.1505674>

Please cite the published version

<https://e-space.mmu.ac.uk>

1 **International Journal of Sustainable Development & World Ecology (2018)**

2 **<https://doi.org/10.1080/13504509.2018.1505674>**

3 **Using the Sustainable Development Goals Towards a Better Understanding of**
4 **Sustainability Challenges**

6 **Walter Leal Filho**

7 Hamburg University of Applied Sciences

8 Research and Transfer Centre “Sustainability and Climate Change Management”

9 Umenliet 20

10 D-21033 Hamburg

11 Germany

12 E-mail: walter.leal2@haw-hamburg.de

14 **Shiv K. Tripathi**

15 Mahatma Gandhi University

16 13th Mile, G.S. Road

17 Khanapara, Under Ri-Bhoi

18 Guhawati

19 Meghalaya 793101

20 India

21 E-mail: shivktripathi@hotmail.com

23 **José Baltazar Salgueirinho Osório de Andrade Guerra**

24 Research Centre of Energy Efficiency and Sustainability from the University of

25 Southern Santa Catarina

26 UNISUL

27 Avenida Pedra Branca, 25

28 Cidade Universitária Pedra Branca

29 88132 000

30 Palhoça

31 SC

32 Brasil

33 E-mail: baltazar.guerra@unisul.br

35 **Ricard Giné-Garriga**

36 Department of Civil and Environmental Engineering (DECA)

37 Engineering Sciences and Global Development (Esc&GD)

38 Barcelona School of Civil Engineering

39 Universitat Politècnica de Catalunya
40 Campus Nord
41 Calle Jordi Girona, 1-3, 08034
42 Barcelona
43 Spain

44 E-mail: ricard.gine@upc.edu

45

46 **Violeta Orlovic Lovren**

47 Department for Pedagogy and Andragogy

48 Faculty of Philosophy

49 University of Belgrade

50 Studentski trg 1

51 Beograd

52 Serbia

53 E-mail: violeta.orlovic@f.bg.ac.rs

54

55 **Jessica Willats**

56 Green Academy

57 Nottingham Trent University

58 50 Shakespeare Street

59 Nottingham NG1 4FQ

60 UK

61 Email: jesswillats@hotmail.co.uk

62

63 **Abstract** The United Nations General Assembly agreed and approved in September
64 2015 the document "2030 Agenda for Sustainable Development", which contains a set
65 of measures aiming to balance economic progress and protection of the
66 environment, whilst at the same time remain aware of the need to address the many
67 disparities still seen between industrialised and developing countries. The Agenda
68 document consists of 17 Sustainable Development Goals (SDGs), which among many
69 other tasks, intend to eradicate poverty and create better health conditions in both
70 developed and developing countries.

71 But despite the need for and the relevance of the SDGs, it is unclear how they
72 may help to address present and future sustainability challenges. Based on the need to

shed some light on such a relationship, this paper describes each of the SDGs, and offers an analysis of the extent to which their implementation may offer support to ongoing attempts to handle some of the pressing problems seen in pursuing sustainable development. Three case studies are presented to show in practice how best the SDGs can be handled. The paper concludes that the process of implementing the SDGs offers unrivalled opportunities to advance equal opportunity and foster economic empowerment, helping countries to promote the cause of sustainable development in their territories, hence benefitting their populations.

Key words Sustainability, Sustainable Development, Sustainable Development Goals, Case Studies and Challenges.

1. Introduction: Sustainability Challenges

The main goals to address present and future sustainability challenges, on a global scale, are moulded within a series of objectives adopted by the United Nations in the scope of the document “Transforming our World: the 2030 Agenda for Sustainable Development”, where the adherent states manifest a clear intention of creating a connection between the three levels of sustainable development: economic, social and environmental, throughout 17 goals and 169 objectives (UN, 2015). According to Waage et al. (2015), the SDGs will mainly act in the areas of environmental justice, governance, and partnership among the subscribing states.

Article 3 of the Universal Declaration of Human Rights states: “Everyone has the right to life, liberty and security of person” (UN, 1948). These ideals are clearly integrated in the pathway for sustainable development, aiming to balance economic progress and protection of the environment, but also mindful of social interests (Emas, 2015; Dempsey et al., 2011), which are fundamental factors for a healthy and prosperous life. This is why the 2030 Agenda for Sustainable Development is heavily marked by a human rights approach, also present in the 17 Sustainable Development Goals mentioned within the document.

The SDGs are an improved adaptation of the Millennium Development Goals (MDGs), which reached their deadline in 2015, which intended to eradicate misery and create better health conditions within developing countries (IPEA, 2010; Sachs, 2012; Osborn et al., 2015; Constanza et al., 2016). Pursuant to a more ambitious vision, the SDGs will be a key instrument to guide social development and environmental sustainability globally. The SDGs are intended to embody a universally shared vision of development towards a safe, just and sustainable space for all human beings. They are

based on the principle that everyone and every country should resume responsibility for playing their part in delivering on this vision. Therefore, the focus will be not only on international cooperation, but also on eliminating discrimination and inequalities within the countries.

In addition, the SDGs will pay more attention to issues of environmental sustainability than was expressed by the MDGs (Griggs et al., 2013). A global concept of environmental injustice reflects segregation in the access to goods, areas and environmental risks among socially different groups (defined by race, class, gender and other characteristics), beyond their involvement and recognition of environmental issues (Agyeman et al., 2002; Agyeman, 2005; Elvers et al., 2008; Schlossberg, 2013).

In a context post-2015 of the Agenda of Sustainable Development, came the critical evaluation of its results, which led to different opinions with regards to whether the Millennium Development Goals were successful. For example, goals associated with poverty and hunger eradication had positive results in some specific regions, such as Eastern Asia, but ended up having insignificant accomplishments in sub-Saharan Africa, Southern Asia and Oceania (Yiu and Saner, 2015). Whilst the MDGs were focused mainly on developing countries and extremely dependant on funding from richer countries, the SDGs consider human development, human rights and equity in all countries, creating partnerships with the private sector, the public sector and the civil society organisations, in order to achieve sustainable development (Kumar et al., 2016).

For the public sector, barriers regarding the adoption of environmental policies include: lack of political commitment; inadequate or unclear responsibilities; inadequate cooperation between political actors; insufficient financial and human resources; lack of evidence or certainty regarding global scenarios, and insufficient knowledge-brokerage

and networking (Clar et al., 2013). On this path, the SDGs can also be used to facilitate the implementation of strategies for sustainable development, both in public and private sectors, serving as a guideline for those actions.

Nonetheless, the public's participation remains an essential tool in the achievement of sustainable development. On that note, behaviour changes are a good example of how to make progress. However, individual changes are not enough to concrete the SDGs, there is yet a necessity for "changes in household behaviours - particularly in the areas of food consumption, transport, energy use and leisure - if we are to achieve more sustainable consumption of natural materials and energy" (Hayward, 2015, p. 65). Behaviour changes can also contribute to the acceptance and proper use of physical and technical innovations reducing environmental impacts (Steg and Vlek, 2008).

The 2030 Agenda states that the determination to mobilize global partnerships "[...] based on a spirit of strengthened global solidarity, focused in particular on the needs of the poorest and most vulnerable and with the participation of all countries, all stakeholders and all people" (UN, 2015, p. 2). The many important challenges that the SDGs are proposing are not something that countries can deal with in isolation. To achieve a long-term sustainability, those partnerships must be based on mutual interests, whilst learning to work together in the making of a real change (Evans and van der Heijden, 2014).

Even though the responsibility of conducting national policies for a sustainable economy and sustainable human development relies on each country, with the support of strong and coherent global economic governance, the ideals behind the SDGs will transform into real policymaking. This is the background against which this research

has been conducted. In particular, it critically reviews the SDGs, and subsequently analyses the extent to which their implementation may offer support to on-going attempts to handle some of the pressing problems seen in pursuing sustainable development. The paper is organized as follows: section 2 provides an in-depth description of the SDGs, with a view to providing better understanding of related sustainability challenges and their connections; three different case studies are presented in detail in the following section; in section 4, the discussion is centred on the lessons learnt from the case studies and the paper ends in section 5 with a synthesis of conclusions and recommendations.

2. Handling the challenges: the Sustainable Development Goals Scope

According to Sachs (2012, p. 2207), our society is facing many challenges given that human activity has been changing the Earth's dynamic, leading to massive greenhouse gas emissions and environmental pollution, acidification of the oceans and loss of biodiversity. Therefore, "in view of these dire and unprecedented challenges, the need for urgent, high profile and change producing global goals should be obvious". This is the basic idea behind the creation of the SDGs.

SDG1 places an emphasis on ending all forms of extreme poverty, which is currently measured as people living on less than \$1.25 a day (United Nations, 2016). It puts an emphasis on reducing poverty by half the proportion of people of all ages, according to respective national definitions. This would require implementation of nationally appropriate social protection systems. The target of providing equal rights to economic resources, as well as access to basic services (Target 1.4), creates an ambitious ground for mass proliferation of integrated and inclusive economic

development. This, if achieved, will help in mainstreaming poor and vulnerable groups in the process of economic development and thus, positively influencing the ‘economic well-being’ of the target groups. Linking the impact of economic, social and environmental shocks, including extreme natural disasters, to poverty is an especially significant measure in ensuring the sustainability of the planned poverty reduction target. This should be of great help in sustaining the economic well being of the poor, as often, such disasters and shocks reduce the developmental impact by significant levels, as well as limiting the opportunities to pursue inclusive economic growth. If good measures can be implemented to protect the poor from such extreme adversities, it would definitely be a milestone in accelerating the efforts towards improving the economic conditions of the target groups. This goal also focuses on significant mobilisation of resources from a variety of sources through enhanced development cooperation, which will help in extending access of resources to poor and vulnerable people in developing and lesser-developed countries. This not only sets out ground for more harmonized economic development across the world but also creates many opportunities, through collective development process innovations, moving seamlessly beyond the geographical boundaries. However, this also poses a challenge in terms of country preferences and bias in promoting the development cooperation according to their choices, which is sometimes subjectively objective. Overall, SDG1 brings hope with tangible mechanisms to realize them and thus, making the world free of poverty. At the same time, one has to be cautious of issues of income inequality, as efforts to reduce poverty on the one side and increasing income inequality on another, this may not help in developing balanced and inclusive economies with poverty eradication goals in the truest sense.

SDG 2, which aims to end hunger and achieve food security with improved nutrition, links sustainable agriculture promotion and offers a cushion to the accomplishment of the poverty eradication goal. This goal is therefore essential to guaranteeing environmental justice. The target of ending hunger by ensuring access to safe, nutritious and sufficient food all year round to all the age groups (United Nations, 2016), will prove to be a significant milestone in providing this basic and essential condition for good quality of life to poor and vulnerable sections of society. This goal details the specific food and nutritional needs of distinct groups; such as children under 5 years of age, adolescent girls, pregnant and lactating women and older persons and thus, sets a foundation for bringing systematic interventions to end hunger with a minimum required nutrition level. The focus on improving the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, will have a direct impact on economic sustainability of small-scale agricultural producers as well as creating access to ‘food with nutrition’ at a local level. This approach aligns with Gandhi’s concept of rural and village sustainability (Rajvanshi, 2016). This goal also addresses the major bottlenecks in effective small-scale agricultural production by targeting issues of land access, know-how, financial access, value-addition and market access to small-scale agricultural producers. Increase in agricultural investment with elimination of export subsidies and trade restrictions are likely to significantly boost the agricultural production at all levels. A focus on climate friendly food production practices will help in minimizing the risks linked with natural disasters, which in some countries, such as India, have previously resulted in a number of adverse impacts, including suicide by small-scale farmers. Proposed steps to control the food commodity market volatility will not only help in

231 controlling the food prices but would also ensure better availability of cost-effective
232 food to poor and vulnerable groups. In all, this goal seems to offer promises for self-
233 sufficiency in food availability through indigenous production, whilst at the same time
234 opening up agriculture as one of the major sources of living for small farmers.

235 SDG 3, which focuses on ensuring healthy lives and promoting well being for
236 all, has a direct impact on quality of life by ending premature mortality and preventable
237 deaths of newborns (United Nations, 2016). Efforts to end the epidemics of AIDS,
238 tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne
239 diseases and other communicable diseases are likely to directly enhance healthy living.
240 Strengthening systems to prevent and treat narcotic drug abuse, harmful use of alcohol
241 and controlling tobacco use will certainly help in improving the well being of all ages.
242 Provisions for universal access to sexual and reproductive healthcare services would
243 impact the healthy living of socially and/or economically disadvantaged women and
244 girls across the world. The target to achieve universal health coverage, including
245 financial risk protection, access to quality essential healthcare services and access to
246 safe, effective, quality and affordable essential medicines and vaccines is particularly
247 important for the economically disadvantaged section of society. The focus on reducing
248 the number of deaths and illnesses from hazardous chemicals and air, water and soil
249 pollution and contamination will create new partnerships, whilst at the same time link
250 this goal to environmental sustainability targets. As quoted by Cutter (1995), Goal 3 and
251 specifically its targets 3.3 and 3.9 are needed to achieve environmental justice. Efforts
252 to increase health financing and the recruitment, development, training and retention of
253 the health workforce in developing and least developed countries would also help in
254 creating new jobs and thus, positively impacting SDG 1. Additionally, it highlights the

great participation of NGOs and other stakeholders at all levels and thereby, accelerating the employment and wage earning potential of the people involved.

SDG 4, touches on one of the most important areas, inclusive and quality education. The target to ensure that all people have access to completely free, equitable and quality primary and secondary education will be a catalyst in strengthening the capacity building, required for other SDG indicators in the future. A focus on quality early childhood development, care and pre-primary education (United Nations, 2016), is an effort to improve the education value-chain from the very earliest stage. Affordable and quality technical, vocational and tertiary education, including university education, will open new opportunities for all. Elimination of gender disparities in education and vocational training would be particularly helpful in enhancing women's participation in the job market and economy. An increase in scholarships would open the way for seamless global knowledge exchange, especially for those in developing or least developed countries. Mainstreaming of the SDGs in education at all levels remains a key focus of this goal. This implies that the process of higher education would call for significant innovations in terms of 'what is being delivered' and 'how it is being delivered.' This goal will also help in creating jobs within the educational sector at different levels and would also contribute to large number of employment generation with a global movement of teachers. Overall, if implemented carefully and systematically, this goal will have direct impact on the success of all the other SDGs.

Ensuring gender equality in all forms and all areas remain a key focus of the fifth SDG. Elimination of all forms of violence against women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation (United Nations, 2016) would help in improving the safe and healthy living of women

and girls. The target to eliminate practices of early and forced marriage and female genital mutilation is a significant step in ensuring the good quality of life for women and girls, particularly in areas where these are imposed in the name of tradition or custom. Steps for social protection and regulating unpaid care and domestic work will add to dignity and quality of life for women around the world. Ensuring participation of women in decision-making and leadership would provide a sound basis for gender equality in the future. Reforms to provide equal financial and economic rights to women will not only help in improving the quality of women's life but also would positively impact the family well being, especially where the woman takes the role of leadership within the family. Overall, this is a very positive and significant goal to contribute to sustainable well being of women and girls.

Goals 6 and 7, as a whole, are required to guarantee environmental justice in a global context, by providing universal and secure access to water and renewable sources of energy. Water, hygiene and sanitation remain a key developmental challenge in many areas of the world. The sixth SDG aims to ensure availability and effective management of water and sanitation for all (United Nations, 2016). The target to achieve universal and equitable access to safe and affordable drinking water for all with access to adequate and equitable sanitation and hygiene will help in significantly improving sustainable living. A focus on increased water-use efficiency across all sectors will help in addressing water scarcity and thus, substantially reduce the number of people suffering from water scarcity. The efforts to improve water quality will link this goal to the various SDGs on environmental sustainability. Trans-boundary cooperation in integrated water resource management will have additional impacts on social and economic cooperation across boundaries and thereby, limit the political tensions in

some cases. Supporting and strengthening the participation of local communities in improving water and sanitation management will be closely linked with the sustainable community partnership linked development focusing on multiple dimensions of the SDGs. Expansion of international cooperation and capacity-building support to developing countries in water and sanitation related activities and programmes; including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies will also provide a strong support to promote the agricultural production (SDG2) and thus, impact the quality of life both directly as well as indirectly.

Access to affordable energy is instrumental in promoting all the development efforts. This access to energy remains a key challenge in many developing or lesser-developed countries and is a major bottleneck affecting GDP growth. SDG 7 addresses this issue by committing to ensure access to affordable, reliable, sustainable and modern energy for all (United Nations, 2016). This goal focuses on improving the energy efficiency on the one side, whilst enhancing the share of renewable energy on the other. The focus on energy infrastructure expansion will also result in increased economic activities and employment opportunities. International cooperation for clean energy research and technology transfer will have direct linkages with the international cooperation in education. The accomplishment of the targets in this area is likely to significantly contribute to poverty reduction and sustainable living.

Sustaining the inclusive and sustainable economic growth with productive and decent working condition for all is the focus of SDG 8 (United Nations, 2016). This goal links the country level economic sustainability to the individual level work dignity. The focus on country level growth strategy with context specific technology and

industry choice should definitely help in accomplishing the minimum 7 percent GDP growth target, a level set for the least developed countries. The provisions to ensure labour standards and human dignity will help in strengthening the working conditions in global supply chains. Prevention of forced labour, including child labour and child recruitment in the military will help in mainstreaming children within the development process. The target to link tourism to local culture will help in preserving the cultural identities and values, whilst contributing to employment creation and entrepreneurship at the same time. An increase in banking and financial services will provide new employment opportunities for young people. If accomplished, this goal would significantly eradicate unemployment and economic challenges within different country contexts. Remarkably, this goal also intends to dissociate economic growth from environmental degradation (Target 8.4), thus pointing out the responsibility of great producers and other controllers in promoting environmental justice.

Infrastructure and technological advancements are the key pillars of development in modern society. SDG 9 aims to promote inclusive and sustainable industrialization by focusing on technology, innovation and sustainable infrastructure (United Nations, 2016). The efforts to strengthen infrastructure will directly influence employment creation and economic development within different contexts, in addition to improving the quality of life. Providing Internet access to all by 2020 will help in ending the digital divide in developing and least developed countries. International cooperation in scientific research and technology development will help in cross border knowledge transfer. A focus on indigenous technologies will help in local capacity building for innovation driven solutions to the different human related problems.

Reducing inequalities amongst countries remains the key focus of SDG 10 (United Nations, 2016). The target on progressively achieving income growth of the bottom 40 percent of the population at a rate higher than the national average is a significant move to improve the conditions of those who are at the bottom of the pyramid. By promoting the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status offers hope for a more globalized world in the next 15 years to come. Fiscal, wage and social protection policies will all help in achieving greater equality. This goal aims at more regulated and integrated global financial markets to prevent artificial economic shocks. Planned and well managed migration targets with a focus on equal opportunity promises for systematic talent movement across the globe. An increase in financial assistance to the least developed and developing countries will help in fighting the different economic, social and consequent political challenges within these countries.

Sustainable urbanisation requires improvement in good quality and safe housing access to all, with sustainable transportation and other support services available. SDG 11 focuses on these issues to ensure that human settlements and cities are inclusive, safe, resilient and sustainable (United Nations, 2016). Specifically, it seeks to i) mind the urbanisation of shanty towns (Target 11.1), ii) guarantee sustainable public transports (11.2), iii) reduce deaths caused by water or air pollution (11.5 and 11.6), and to iv) ensure access to sustainable green areas (11.7), with special attention given to the more vulnerable populations. Access to safe housing is a major challenge of poor and vulnerable groups of the society. The target to provide safe and affordable housing and upgrading slums will help in improving the quality of life. The target to use local

building material in this process will help in strengthening the local building material industry.

Sustainable consumption and production patterns are the key focus of SDG 12 (United Nations, 2016). The second half of 20th century witnessed exponential growth in consumption and production, which is believed to have lead to a state of uncontrolled growth with adverse environmental impacts. This can also be considered as a major cause behind the growing income inequality despite numerically growing GDP. Under the proposed framework, the developed countries will be taking the lead in implementing a 10 year framework of programmes on sustainable consumption and production. This goal focuses on encouraging efficient use of natural resources and reducing food wastage at all stages of the food value-chain. Improvement in public procurement procedures will help in checking the corruption from both the demand as well as from the supply side. The shift towards sustainable production will also have a positive impact on environmental sustainability.

Although climate change and environmental sustainability issues are directly or indirectly integrated with most of the SDGs, SDG 13 particularly focuses on combating climate change and its impact (United Nations, 2016). Introducing education and capacity building initiatives for climate chain mitigation, adaptation and impact reduction is one of the key priorities of SDG 13. By integrating the climate change issues in national policies and strategies, the goal sets a foundation to the climate change and environmental mainstreaming at different levels. This goal will help in controlling the adverse impacts of climate change related issues. Specifically, goal 13.b intends to support marginalized communities and vulnerable groups of women and

396 young people, in order to lower the risks of climate change and environmental
397 degradations.

398 Conservation of natural resources is another dimensions of environmental
399 sustainability. SDG 14 aims to conserve and ensure sustainable use of the ocean, seas
400 and marine resources (United Nations, 2016). It aims to reduce marine pollution and
401 protect marine and coastal ecosystems. Efforts to regulate fishing and end overfishing
402 will help in improving the access and quality of foods linked to the fishing industry. A
403 focus on improving economic benefits to Small Island developing states and least
404 developed countries from the sustainable use of marine resources will also help in
405 promoting employment and economic development.

406 Another important aspect of environmental sustainability is sustainable use of
407 terrestrial ecosystems and forests, which is captured well by SDG 15 (United Nations,
408 2016). The targets include protecting mountain ecosystems and biodiversity and
409 reversing land degradation. The focus on sustainable forest management will help in
410 reducing deforestation and thus, positively impact upon environmental sustainability.
411 Efforts to end the poaching and trafficking of protected species will create need for
412 alternative livelihood opportunities for the local communities, which can be planned
413 through sustainable capacity building.

414 Peace and harmony is an essential condition for sustainable human living. SDG
415 16 focuses on promoting peaceful and inclusive societies with access to justice (United
416 Nations, 2016), and calls for equal access to knowledge and justice services. Reducing
417 the illicit financial and arms flows will be a significant move towards promoting peace.
418 Efforts to end corruption will help in mobilising more money for development efforts.
419 This also implies more transparency in governance of institutions at all levels.

Participation of developing countries in the institutions of global governance would be a significant move in creating a level playing field for global development.

SDG 17 focuses on issues related to effective implementation of all the other remaining SDGs, promoting peaceful and inclusive societies with access to justice (United Nations, 2016). This would involve domestic resource mobilisation, assisting developing countries in external resource mobilisation, international cooperation for transfer of environmentally sound technologies, capacity building, policy coherence, data monitoring and multi-stakeholder partnerships. This goal promises more resources and innovative partnerships for pushing collective efforts towards sustainable development.

In terms of sustainability challenges, and from an environmental perspective, there is evidence that all previous goals are strongly interlinked. More specifically, in much the same way as a "chain is only as strong as its weakest link", sustainable development and environmental justice will only perform to the limits of its weakest SDG.

As a case in point, climate change mitigation will require major transformations in the water, energy and food sectors, and it is also indispensable to protect people's well being. It has been proven that climate change has direct effects on health, with the increase in heat related deaths, the consequences of food crisis, and various health problems related to greenhouse gases such as respiratory disorders as well as mental health disorders associated with natural disasters (Patz et al., 2014).

Many health related goals are also related to reducing inequalities, namely through: quality education; gender equality; decent work and economic growth; peace, justice and strong institutions. For Doyle and Stiglitz (2014, p.6), "Extreme inequalities

tend to hamper economic growth and undermine both political equality and social stability." Moreover, the World Economic Forum has already stated that inequalities slow down the process of sustainable development, and hence jeopardize cooperation for international environmental agreements on climate change (Pickett, 2015). According to Blanke and Corrigan (2016), the key answer to undermining inequalities is to find a way of conducting public and private stakeholders to a people centred economic policymaking.

Aside from lowering inequalities, the reduction of all forms of violence is also highlighted as extremely important in order to pursue sustainable development. Studies in this area reveal that the more countries are affected by violence and fragility, the lesser they manage to achieve sustainable human development (Crawford, 2015). Furthermore, gender based exclusion is one of the characteristics of conflict regions (Chandran et al., 2015), which is unfortunate because the participation of women in the process of ending violence is considered to be extremely valuable. According to Fink and Bhulai (2015), women play major roles as peace builders and countering violent ideologies. Once again, promoting equality is linked not only to economic aspects, but is also a major driver to maintain local and regional stability.

Another important issue society is now facing is that of both internal and across borders displacement, also related to climate change, inequalities and health. In mid-2015 there were 20.2 million refugees and an estimate of 34 million internally displaced people (Beardmore, 2015). This issue was not well explored in the 2030 Agenda. Despite the slogan of "Leaving no one behind", little was done to situate migrants and refugees in humanitarian planning (Beardmore, 2015). Migration needs to combine the economic, environmental and social aspects of sustainable development and, thus, it

requires broader discussions on the matter at a global, regional and national level, so that coherent policies between those levels can be accomplished (Schraven et al., 2016).

3. Case Studies: The Implications of the Sustainable Development Goals (SDGs)

Three case studies have been selected based on; a) their scope, b) the thematic emphasis and c) the diversity of stakeholders, to illustrate how the implementation of coherent strategies towards the achievement of all internationally agreed development goals is put into practice. They are representative examples to give an adequate overview of sustainability challenges throughout the planet.

3.1. Spain

In the discussion on the post-2015 development agenda, particularly in the definition of the Sustainable Development Goals (SDGs), Spain has maintained an active position (Pedrajas 2014). Specifically, Spain has led, in 2013, the High-Level Consultation in Hunger, Food Security and Nutrition. It has supported consultations with the private sector in Latin America in 2014 and it has actively participated in the Open Working Group of the General Assembly on the Sustainable Development Goals, which has been in charge of the definition of all SDGs and their targets. There is however an issue: its international position does not necessarily complement its domestic policies.

In brief, Spain's economic and social situation remains marked by a comprehensive, multidimensional, global crisis. The austerity measures in public policies adopted in the past few years have severely impacted on the Spanish society, particularly on the most vulnerable segments of the population. The inequality gap has increased significantly and the poverty rate continues to grow, especially among minors.

In this context, Spain's ability to reach the targets set out in the SDGs has been questioned, to some extent, in a recent report. On the one hand, and based on the SDG Index (Sachs et al 2016), a tool developed to rank countries with regards to their initial status on the 17 SDGs, Spain comes only 30th among 149 countries included in the study, and 26th among OECD countries (34, in total). On the other hand, the report also presents SDG Dashboards, with each goal coloured as "green," "yellow," or "red", indicating whether the country has already achieved the goal (green), is in a "caution lane" (yellow), or is seriously far from achievement as of 2015 (red). Results demonstrate that Spain faces major challenges - as indicated by a red rating - in meeting nine of the SDGs, and it is only on a good path towards reaching SDG 5 on gender equality. The greatest challenges exist for climate change (SDG 13), ecosystem conservation (SDGs 14 and 15), and sustainable consumption and production (SDG 12), although red rating in specific indicators included in other goals emphasizes other acute challenges. For instance, an unemployment rate of 22.4 % places Spain in the unenviable position of tenth to last in the ranking (SDG 8), and it also ranks in the lowest positions in relation to the net Official Development Assistance (ODA) as of the GNI (SDG 17).

Spain is obliged to contribute to the implementation of the 2030 Agenda in developing countries. For this purpose, besides the issue of increasing the level of ODA, it should also rethink development cooperation as a state policy, strengthen the technical capacities the Spanish Agency for International Cooperation for Development (AECID), and focus action in least developed countries to provide them with basic services, particularly for children and women.

Finally, the role of local governments should be promoted, as decentralised governments seem to be better placed to shape viable policies that respond to the need and aspirations of local people and, for instance, are more likely to conceive and implement pro-poor policies. Interestingly, various examples exist in Spain of Autonomous Governments defining a local agenda to meet the SDGs (Generalitat Valenciana, 2016), (Generalitat de Catalunya, 2016).

3.2. India

India appears to be preparing well for commitment towards the SDGs. The reflections can be easily traced in the planning documents of both federal government as well as most of the provincial governments. Different organisations from different sectors, including corporate houses, government departments, civil society organizations, academic institutions, amongst others, all are gearing up towards aligning activities to SDG targets. However, there are a number of context specific challenges in the process.

Based on the SDG Index (Sachs et al 2016), India ranks 110 out of 149 countries included in the study, and results indicate that this country faces several challenges related to the majority of the SDGs. More specifically, population growth is one of the more challenging areas. Sekhawat (2015) observes that if India's population reaches 1.7 billion by 2050, as estimated by UN, the country is likely to face a widening ecological deficit even if its current per-capita levels of resource-consumption remain the same. This is important to note that the population growth will also be a challenging area for social and economical sustainability, as it can adversely hit most of the development programs.

Another important issue links to governance. India has a federal government and two provincial governments. Provincial governments may not be from the same political party that forms the federal government. Sometimes, due to a difference in political ideologies and interests, the development work suffers. Further, the provincial level governance, in some cases, has also been blamed for less transparency in the development related projects. The corruption has been one of the major challenges in the country. The corruption takes most of the resources from development channels to individual hands. The nexus between political leaders, corporations and bureaucracy is often blamed for rising corruption in the country, which affects the development work both qualitatively and quantitatively. However, the increasing young population, which is a strong source of social capital, is actively coming forward to change the corrupt system with more transparent and reliable governance (Kattumuri, 2015). Also, in the future the corruption is likely to be reduced, as the current federal government appears to be working strongly against this.

At a micro level, the SDG implementation requires awareness and capacity building programmes in this area. Many of the executives, both in the public sector and private sector, still view the SDGs mainly as environmental sustainability initiatives. Therefore, there is a great need to harmonize and integrate all of the three dimensions in SDG implementation capacity building programmes. Despite the challenges, the country is moving well in the direction of achieving the SDGs. With commitment and clarity, it is expected that India will be making significant progress in SDG implementation in times to come.

3.3. Serbia

Serbia was actively involved in the global process of prioritizing goals for the future, as one of 56 countries participating in the campaign “The World We Want”. “The Serbia We Want” campaign was initiated in 2013, involving over 250 000 people in consultations, with 28 000 people actively participating through the web portal (www.srbijakakvuzelim.rs), social networks or direct consultations (focus groups, workshops, interviews). As a result of the consultations, nine priorities for post 2015 development were recognized and grouped into three following tiers:

1: More and better jobs and decent employment; Eradication of poverty and better support to vulnerable groups; Good governance and reliable institutions.

2: Culture of responsibility, tolerance and solidarity (culture of social cohesion); Better quality of education; Better healthcare.

3: Sustainable environment; Equality between women and men; Better management of migration and population mobility. (UN Serbia, 2013)

The Republic of Serbia took part in the adoption of the 2030 Agenda for Sustainable Development, as a member of the UN Economic and Social Council - ECOSOC (for the period 2014-2016) and of the Open Working Group, as well as of the Intergovernmental Committee of Experts for financing Sustainable Development. At the end of 2015, the Government of Serbia adopted the Decision on the establishment of the Interdepartmental Working Group for the implementation of the 2030 Agenda for Sustainable Development, with responsibility for monitoring and implementation of the Agenda and all goals and objectives (<http://www.mfa.gov.rs>).

Further steps in implementation of the goals need to be supported by accurate data, well-developed evaluation and monitoring models and quality coordination

between institutions. According to the SDG Index (Sachs et al, 2016), Serbia takes 39th position on the list of 149 countries; as shown by the SDG Dashboard, the major progress has been achieved previously in the following areas: eliminating poverty (SDG 1), provision of clean water and sanitation (SDG 6) and reducing of inequalities (SDG 10); SDGs 2,3,4,7,9,11 and 17 are colored “yellow”, which means that it is partially achieved, whilst the others are red – meaning that there is still a long way to its achievements. SDG 14 has been excluded for Serbia, since there is no sea within its borders. Within SDG 12, waste-water treatment has been marked red, as well as the CO₂ emissions from the energy in Serbia within SDG 13. Among environmental challenges there is also the issue of complete protection of terrestrial sites (SDG 15), while the government efficiency rate makes a key challenge among the indicators of achievement of SDG 16.

4. Discussion - Lessons Learned

The diversity of examples and perspectives from the case studies allow the identification of some lessons learned. These are as follows:

a) Inclusiveness: no one must be left behind.

The SDGs focus strongly on reducing inequality, with many goals designed to ‘leave no one behind’. Therefore, the SDGs universally apply to all, and countries from both developed and developing countries will need to mobilise efforts to achieve the SDGs. A paradigm shift is advocated to define the poor and approach the most vulnerable segments of population. The pledge that ‘no one will be left behind’ therefore requires a focus on the poorest and most vulnerable people to reduce their exposure and vulnerability to climate-related

extreme events and other economic, social and environmental shocks and disasters.

b) The need for improved cooperation and stronger alliances between the public sector, the private sector and civil society.

Throughout the case studies it can be seen that there is a growing awareness of the challenges in achieving the SDGs amongst citizens, including vulnerable groups; when asked, people are ready to provide inputs and be more active in finding solutions to the socio-environmental problems they face. A variety of issues related to political changes, migration or poverty are all interrelated, affecting the implementation of the SDGs in the three countries used as case studies, and beyond. A greater coordination of the works undertaken by the different sectors is needed, in order to make progress in achieving sustainable development. At present, the Encyclopedia of the Sustainable Development Goals, currently on preparation, congregates around 1.700 sustainability experts from academia, government and NGOs working on sustainable development.*

c) The need for Governance, Indicators and a Monitoring Framework for the implementation of the Sustainable Development Goals.

The experience of the MDGs underscores the importance of good governance, and outlines the need for using adequate indicators as early as possible (Sustainable Development Solutions Network, 2015). Indeed, indicators will be

(*) Details can be seen at: <https://www.haw-hamburg.de/en/ftz-nk/publications/encyclopedias/sdgs.html>

the backbone of the monitoring progress towards achieving the SDGs at the local, national, regional, and global levels. One lesson learnt from the MDGs is that we cannot manage what we do not measure, and what gets measured is far more likely to get done. It is therefore necessary to identify and apply specific, measurable and action-oriented indicators to turn the SDGs and their targets into a management tool to help countries develop implementation strategies and allocate resources accordingly (Sustainable Development Solutions Network, 2015), (Hák et al, 2016). In addition, a report card based on a reduced set of reliable indicators will allow them to measure progress and help ensure the accountability of all stakeholders for achieving the SDGs. However, it will take many years before the official SDG indicators framework will be underpinned by comprehensive data (Sachs et al, 2016).

d) The need for increased accountability: A crucial element to promote and accelerate the SDG results will be citizens holding governments and donors accountable. The raw material for accountability is high-quality data providing the right information on the right things at the right time (Independent Expert Advisory Group on a Data Revolution for Sustainable Development, 2014), and especially data on public spending and revenue/aid in budget-related documents will allow civil society to track increases in ‘means of implementation’ for the SDGs (Martin and Walker, 2015).

e) **Improved financing mechanisms:** The success of the SDGs will need countries worldwide to invest adequately in addressing their challenges. The investments for sustainable development will not be heavy globally speaking, certainly not compared with the massive costs if no investment is made (Sachs, 2012). Moreover, failing to tackle inequality will add hundreds of billions of dollars to the spending needed to end poverty: failure to tackle inequality will mean failure to deliver the SDGs (Martin and Walker, 2015). Sachs (2008) estimated that meeting the major goals of poverty reduction; biodiversity conservation; climate change mitigation, and primary health for all would need perhaps 2–3% of global income (Sachs, 2008).

5. Conclusions

The aim of this paper has been to explore the linking process between the SDGs and the need to provide a better understanding of the current and emerging challenges in respect of sustainable development. This is needed, since there is otherwise a risk of investing much time and resource in trying to implement the SDGs without addressing the existing and still open sets of questions on how best to pursue sustainability. The paper has demonstrated that the process of implementation of the SDGs offer unrivalled opportunities, as well as many challenges, which need to be met in advancing equal opportunity and fostering economic empowerment, which in turn may help to address problems related to discrimination and ignorance, which perpetuate poverty and restrict growth. The extent to which the SDGs will be supported by investments in education, infrastructure and scientific and technological research and hence be able to lead to

tangible results in the medium and long term, helping developing countries to overcome the many barriers seen in the transition process, is a point in need of further study.

Acknowledgements

The authors would like to thank Jéssica Garcia and Sthefanie Aguiar da Silva for their contributions in the revision of part of this paper, for which a study was conducted by the Research Centre on Energy Efficiency and Sustainability (Greens), from the University of Southern Santa Catarina (Unisul), in the context of the projects: Building Resilience in a Dynamic Global Economy: Complexity across scales in the Brazilian Food-Water-Energy Nexus (BRIDGE) funded by the Newton Fund, Fundação de Amparo à Pesquisa e Inovação do Estado de Santa Catarina and the Research Councils United Kingdom (RCUK).

References

- Agyeman J, Bullar R, Evans B (2002) Just sustainabilities: development in an unequal world. London: Earthscan.
- Agyeman J. (2005) Sustainable communities and the challenge of environmental justice. New York: New York University Press.
- Beardmore L (2016) Displacement and development. In: Sustainable Development Goals: The people's agenda. UNA-UK.
- Blanke J, Corrigan G (2016) Promoting inclusive growth for healthy economies. In: Sustainable Development Goals: The people's agenda. UNA-UK.
- Chandran R, Cooper H, Ivanovic A (2015) Managing major risks to sustainable development: Conflict, disaster, the SDGs and the United Nations. A report prepared for

706 the United Nations Department of Economic and Social Affairs for the 2016
 707 Quadrennial Comprehensive Policy Review. Available at
 708 <<http://www.un.org/en/ecosoc/qcpr/pdf/sgr2016-deskreview-transition.pdf>>
 709 Clar C, Prutsch A, Steurer S (2013) Barriers and guidelines for public policies
 710 on climate change adaptation: A missed opportunity of scientific knowledge-brokerage.
 711 Natural Resources Forum 37 (2013) 1–18. DOI: 10.1111/1477-8947.12013
 712 Crawford A, (2015) Climate Change, Conflict, and the Sustainable Development
 713 Goals. International Institute for Sustainable Development. Available at
 714 <[https://www.iisd.org/blog/climate-change-conflict-and-sustainable-development-](https://www.iisd.org/blog/climate-change-conflict-and-sustainable-development-goals)
 715 [goals](https://www.iisd.org/blog/climate-change-conflict-and-sustainable-development-goals)>
 716 Cutter S L (1995) Race, class and environmental justice. Progress in human
 717 geography, 19, 111-111.
 718 Dempsey N, Bramley G, Power S, Brown C (2011) The Social Dimension of
 719 Sustainable Development: Defining Urban Social Sustainability. Sustainable
 720 Development, 19, 289–300. DOI: 10.1002/sd.417
 721 Doyle M W, Stiglitz J E (2014) Eliminating Extreme Inequality: A Sustainable
 722 Development Goal, 2015–2030. Ethics & International Affairs, 28, 5-13. DOI:
 723 <http://dx.doi.org/10.1017/S0892679414000021>
 724 Elvers H.D, Gross M, Heinrichs H (2008) The diversity of environmental
 725 justice. European Societies, 10(5), 835–856.
 726 Emas R (2015) The Concept of Sustainable Development: Definition and
 727 Defining Principles. Brief for GSDR 2015. Available at
 728 [https://sustainabledevelopment.un.org/content/documents/5839GSDR%202015_SD_co](https://sustainabledevelopment.un.org/content/documents/5839GSDR%202015_SD_concept_definition_rev.pdf)
 729 [ncept_definition_rev.pdf](https://sustainabledevelopment.un.org/content/documents/5839GSDR%202015_SD_concept_definition_rev.pdf)

730 Evans A, van der Heijden K, (2014) A Global Partnership for Sustainable
 731 Development: Essential Ingredients. Independent Research Forum. Available at
 732 [http://www.irf2015.org/sites/default/files/publications/Retreat%20%235_Background%](http://www.irf2015.org/sites/default/files/publications/Retreat%20%235_Background%20Paper%202_Final.pdf)
 733 [20Paper%202_Final.pdf](http://www.irf2015.org/sites/default/files/publications/Retreat%20%235_Background%20Paper%202_Final.pdf)
 734 Griggs D, Stafford-Smith M, Gaffney O, Rockström J, Öhman M C,
 735 Shyamsundar, P, Noble I (2013) Sustainable development goals for people and planet.
 736 Nature, 495, 305-307. doi:10.1038/495305a
 737 Fink N C, Bhulai R (2016) Development and countering violent extremism. In:
 738 Sustainable Development Goals: The people's agenda. UNA-UK.
 739 Generalitat de Catalunya (2016) Pla Nacional per als Objectius de
 740 Desenvolupament Sostenible. Barcelona.
 741 Generalitat Valenciana (2016) Una Comunitat compromesa amb la Cooperació i
 742 l'Agenda 2030 per al Desenvolupament Sostenible. Valencia, Spain.
 743 Hák, T, Svatava Janoušková, Bedřich Moldan, Sustainable Development Goals:
 744 A need for relevant indicators, Ecological Indicators, Volume 60, January 2016, Pages
 745 565-573, ISSN 1470-160X, <http://dx.doi.org/10.1016/j.ecolind.2015.08.003>.
 746 (<http://www.sciencedirect.com/science/article/pii/S1470160X15004240>)
 747 Hayward B (2016) Changing behaviour to achieve progress. In: Sustainable
 748 Development Goals: The people's agenda. UNA-UK.
 749 Independent Expert Advisory Group on a Data Revolution for Sustainable
 750 Development (2014) A World That Counts: Mobilising The Data Revolution for
 751 Sustainable Development [Internet]. New York and Geneva; Available:
 752 <http://www.undatarevolution.org/report/>.

753 IPEA (2010) Objetivos do Milênio - Relatório Nacional de Acompanhamento.
754 Available at:
755 <[http://ba.one.un.org/content/dam/undp/library/MDG/english/MDG%20Country%20Re](http://ba.one.un.org/content/dam/undp/library/MDG/english/MDG%20Country%20Reports/Brazil/brazilinformenacionalodm2005.pdf)
756 [ports/Brazil/brazilinformenacionalodm2005.pdf](http://ba.one.un.org/content/dam/undp/library/MDG/english/MDG%20Country%20Reports/Brazil/brazilinformenacionalodm2005.pdf)>. Last accessed on 27.09.2016.

757 Kattumuri R (2015) Sustainable Development: The goals and the challenges
758 ahead [online] International Growth Centre. Available at:
759 [http://www.theigc.org/blog/sustainable-development-the-goals-and-the-challenges-](http://www.theigc.org/blog/sustainable-development-the-goals-and-the-challenges-ahead/)
760 [ahead/](http://www.theigc.org/blog/sustainable-development-the-goals-and-the-challenges-ahead/) [Accessed 4th Nov. 2016].

761 Kumar S, Kumar N, Vivekadhish S (2016) Millennium development goals
762 (MDGS) to sustainable development goals (SDGS): Addressing unfinished agenda and
763 strengthening sustainable development and partnership. Indian Journal of Community
764 Medicine (Editorial Commentary), 41, 1-4.DOI: 10.4103/0970-0218.170955.

765 Martin M, Walker J (2015) Financing the Sustainable Development Goals:
766 Lessons from Government Spending on the MDGs. Washington D.C.

767 Osborn D, Cutter A, Ullah F (2015) Universal Sustainable Development Goals:
768 Understanding The Transformational Challenge For Developed Countries. : Stakeholder
769 Forum.

770 Pa Patz J A, Frumkin H, Holloway T, Vimont D J, Haines A (2014) Climate
771 Change: Challenges and Opportunities for Global Health. The Journal of the American
772 Medical Association, 312(15), 1565-1580. doi:10.1001/jama.2014.13186

773 Pedrajas Herrero M (2014) Las prioridades de la posición española para la
774 Agenda post-2015. Glob y Desarro. ;880: 127–140.

775 Pickett K (2015) 5 reasons why we need to reduce global inequality. World
776 Economic Forum. Available at [https://www.weforum.org/agenda/2015/09/5-reasons-](https://www.weforum.org/agenda/2015/09/5-reasons-why-we-need-to-reduce-global-inequality/)
777 [why-we-need-to-reduce-global-inequality/](https://www.weforum.org/agenda/2015/09/5-reasons-why-we-need-to-reduce-global-inequality/)

778 Progress of the realization of Millennium Development Goals in the
779 Republic of Serbia. (2009). Belgrade: United Nations Development
780 Programme Serbia.

781 Rajvanshi A (2016) How Gandhiji's Ideas Show The Path To A Sustainable
782 Planet. [online] Huffington Post. Available at: [http://www.huffingtonpost.in/dr-anil-k-](http://www.huffingtonpost.in/dr-anil-k-rajevanshi/how-gandhijis-ideas-show-the-path-to-a-sustainable-planet/)
783 [rajvanshi/how-gandhijis-ideas-show-the-path-to-a-sustainable-planet/](http://www.huffingtonpost.in/dr-anil-k-rajevanshi/how-gandhijis-ideas-show-the-path-to-a-sustainable-planet/) [Accessed 29 Oct.
784 2016]

785 Sachs J D (2008) Common wealth: economics for a crowded planet. New York:
786 Penguin Press.

787 Sachs J D (2012) From millennium development goals to sustainable
788 development goals. Lancet. 2012;379: 2206–11. doi:10.1016/S0140-6736(12)60685-0

789 Sachs J, Schmidt-Traub G, Kroll C, Durand-Delacre D, Teksoz K (2016) SDG
790 Index and Dashboards - Global Report. Bertelsmann Stiftung and Sustainable
791 Development Solutions Network (SDSN). New York

792 Schraven B, Keijzer N, Knoll A (2015) Post 2015: Making Migration Work for
793 Sustainable Development. German Development Institute. Available at
794 https://www.die-gdi.de/uploads/media/BP_21.2013.pdf

795 Schlosberg D (2013) Theorising environmental justice: the expanding sphere of
796 a discourse. Environmental Politics, 22(1), 37–55.

797 Sekhawat R (2015) The real challenges to sustainable development . [online]
 798 Indiatogether.Org. Available at: [http://indiatogether.org/challenges-to-sustainable-](http://indiatogether.org/challenges-to-sustainable-development-government)
 799 development-government [Accessed 4th Nov. 2016].
 800 “Serbia we Want” – second phase of consultations on Culture and Development,
 801 Final Report (2014) retrieved on September 10,2016 from www.srbijakakvuzelim.rs
 802 Statement on international cooperation on the official web page of the Ministry
 803 of Foreign Affairs of Serbia, retrieved on September 15, from <http://www.mfa.gov.rs>
 804 Steg L, Vlek C (2008) Encouraging pro-environmental behaviour: An
 805 integrative review and research agenda. *Journal of Environmental Psychology*, 29, 309–
 806 317. doi:10.1016/j.jenvp.2008.10.004
 807 Sustainable Development Solutions Network (2015) Indicators and a Monitoring
 808 Framework for the Sustainable Development Goals: Launching a data revolution for the
 809 SDGs. Paris and New York.
 810 UN (1948) The Universal Declaration of Human Rights. Available at
 811 <http://www.un.org/en/universal-declaration-human-rights/>
 812 UN (2013) Final Report on consultations “Serbia we Want”, retrieved on
 813 September 5,2016 from www.srbijakakvuzelim.rs
 814 UN (2015) Transforming our World: The 2030 Agenda For Sustainable
 815 Development. Available at <[http://www.un.org/pga/wp-](http://www.un.org/pga/wp-content/uploads/sites/3/2015/08/120815_outcome-document-of-Summit-for-adoption-of-the-post-2015-development-agenda.pdf)
 816 content/uploads/sites/3/2015/08/120815_outcome-document-of-Summit-for-adoption-
 817 of-the-post-2015-development-agenda.pdf>
 818 United Nations Economic and Social Council (2016) Report of the Inter-Agency
 819 and Expert Group on Sustainable Development Goal Indicators (Ref
 820 E/CN.3/2016/2/Rev.1). New York; 19 February 2016. Un.org (2016 a) United Nations

821 Official Website. [online] Available at: <https://sustainabledevelopment.un.org/sdg1>
822 [Accessed 28th Oct 2016].

823 United Nations (2016) United Nations Official Website. [online] Available at:
824 <https://sustainabledevelopment.un.org> [Accessed 28th Oct 2016].

825 Yiu L S, Saner R (2015) Sustainable Development Goals and Millennium
826 Development Goals: an analysis of the shaping and negotiation process. Asia Pacific
827 Journal of Public Administration, 36 (2), 89-107. DOI: 10.1080/23276665.2014.911487

828 Waage J, Yap C, Bell S, Levy C, Mace G, Pegram T, Mayhew S (2015)
829 Governing the UN Sustainable Development Goals: interactions, infrastructures, and
830 institutions. The Lancet Global Health, 3(5), e251-e252.

831
832